

IN THE CLAIMS

Cancel Claims 1-38

Add the following Claims 39-67.

39. (New) A method of minimizing collisions in a CSMA/CA wireless data communication system using an access point, the method comprising:

sensing the presence of a client desirous of communication with the access point;

allocating a start time slot list having at least one unique start time slot during which the client may begin transmitting;

transmitting the start time slot list to the client; and

receiving a transmission from the client, the transmission beginning only during the start time slot(s) indicated by the start time slot list.

40. (New) The method of claim 39, wherein allocating includes allocating a first start time slot list for the client and allocating a second start time slot list for itself, each start time slot list including a subset of available transmit start time slots during which the client and the access point may begin to transmit.

41. (New) The method of claim 39, wherein allocating includes allocating a first start time slot list for a first client and allocating a second start time slot list for a second client, each start time slot list including a subset of the available transmit start time slots during which the first and second clients may begin to transmit.

42. (New) The method of claim 39, wherein allocating includes allocating a first start time slot list for the client and allocating a second start time slot list for another device, wherein the first and second start time slot lists are disjoint.

43. (New) The method of claim 39, wherein allocating includes expanding the start time slot list based on collision detection.

44. (New) The method of claim 43, wherein allocating includes allocating a first start time slot list for the client, allocating a second start time slot list for another device, each start time slot list including a subset of available transmit start time slots, and replicating at least one of the first start time slot list, the second start time slot list, and the available transmit start time slots.

45. (New) The method of claim 39, wherein allocating includes expanding the start time slot list based on either collision detection or sensed client count.

46. (New) The method of claim 45, wherein expanding includes replicating the start time slot list.

47. (New) The method of claim 46, wherein expanding includes creating a larger start time slot list having proportionately larger pools of start time slots, each pool associated with a class of transmission.

48. (New) The method of claim 39, wherein sensing comprises:

receiving an association request from the client; and

acknowledging the association request from the client.

49. (New) The method of claim 39, wherein allocating includes:  
measuring a traffic value for the client; and  
assigning the start time slots based on the traffic value.

50. (New) The method of claim 39, wherein allocating includes:  
assigning at least one pair of a high-priority start time slot and a low-priority start time slot substantially equally displaced in time from a center start time slot.

51. (New) The method of claim 39, wherein allocating includes:  
determining a class of data for transmission; and  
assigning the start time slots based on a pool of start time slots associated with the class of data for transmission.

52. (New) The method of claim 39, wherein allocating includes:  
receiving a priority value from the client; and  
assigning the allocated transmit time slots based on the priority value.

53. (New) The method of claim 39, wherein the start time slot list includes a high-priority time slot and a low-priority time slot substantially equally displaced in time from a center time slot.

54. (New) A client capable of receiving the start time slot list of claim 39, wherein the start time slot list includes

a plurality of start time slots, the client selecting an entry from the start time slot list based on a randomizing function.

55. (New) The client of claim 54 wherein the selecting is based on a randomizing function with a substantially equal likelihood of selection for any element of the start time slot list.

56. (New) The client of claim 54, wherein the start time slot list includes a high-priority time slot and a low-priority time slot substantially equally displaced in time from a center time slot.

57. (New) The client of claim 56 wherein the selecting includes selecting between the high-priority start time slot and the low-priority start time slot based on a randomizing function.

58. (New) An access point that minimizes collisions in a CSMA/CA wireless data communication system, the access point comprising:

- a client sensor for detecting the presence of a client desirous of communication with the access point;

- a start time slot allocator for allocating a start time slot list having one or more unique start time slots during which the client may begin to transmit;

- an access point transmitter for transmitting the start time slot list to a client receiver; and

- an access point receiver for receiving a transmission from the client, the transmission being received only during the start time slot(s) indicated by the start time slot list.

59. (New) The access point of claim 58, wherein the start time slot allocator includes:

a traffic analyzer generating a traffic value for the client; and

a start time slot selector responsive to the traffic value.

60. (New) The access point of claim 59, wherein the traffic value comprises:

one of a class of data for transmission and a priority value.

61. (New) The access point of claim 58, wherein the start time slot allocator comprises:

a start time slot generator for generating at least one pair of a high-priority time slot and a low-priority start time slot, the high-priority time slot and the low-priority start time slot substantially equally displaced in time from a center start time slot.

62. (New) The access point of claim 58, wherein the access point receiver can receive a priority value from the client, and wherein the start time slot allocator includes a start time slot selector for choosing at least one entry from the start time slot list based on the priority value.

63. (New) The access point of claim 58, wherein the client sensor includes an association processor for identifying an association request.

64. (New) The access point of claim 58, wherein the start time slot allocator generates a randomized selection signal, the

randomized selection signal operatively selecting one start time slot from the start time slot list.

65. (New) The access point of claim 64, wherein the randomized selection signal selects start time slots with a substantially equal probability.

66. (New) The access point of claim 58, wherein the start time slot allocator is responsive to a fixed priority value associated with the client.

67. (New) A client responsive to the start time slots of Claim 58, the client including:

a start time slot selector for choosing an entry from the start time slot list based on a randomizing function; and

a transmitter gate permitting a client transmitter to begin operation only during the time associated with the entry.